GENERAL INDEX TO VOLUME XXXIII

New scientific names of plants and the final members of new combinations are printed in bold face type; synonyms and page numbers having reference to figures and plates, in italics; and previously published names and all other matter, in ordinary type.1

Aceto-carmine stain in studies of yeast cultures, 253, 260

Aceto-orcein stain in studies of yeast cultures, 253, 260, 282, 288

Acostaea, 84

Acupula, Mexico, maize grown near, 230 American Carboniferous floras, Contributions to our knowledge of. VIII. Another Medullosa from Iowa, 141; IX. Some petrified seeds from Iowa, 291

Anderson, Edgar. Maize in Mexico - A preliminary survey, 147

Andrews, Henry N.: and Jules A. Kernen. Contributions to our knowledge of American Carboniferous floras. VIII. Another Medullosa from Iowa, 141; and Lee W. Lenz. The Gallatin fossil forest, 309; Ellen M. Kern and. Contributions to our knowledge of American Carboniferous floras. IX. Some petrified seeds from Iowa, 291

Archeological investigations of maize, 161,

Autlán, Mexico, varieties of maize common at, 149, 158

Blastodendrion, 264 Bothriochilus, 398 Brassavola, 384 Brazilin stain in studies of yeast cultures, 253, 256, 278, 286

"Cacahuzintle" variety of maize, 149, 166 Carboniferous floras, American, Contribu-tions to our knowledge of. VIII. Another Medullosa from Iowa, 141; IX. Some petrified seeds from Iowa, 291 Cardiocarpus, 295

Cattleya, 380

Chalco, Mexico, maize from, 234 Chihuahua, Mexico, maize from, 247 Coal balls: studies of, 141, 291; map showing mines where found, 143

Codonospermum, 303

Conostoma, 291; oblongum, 291, longitudinal section and micropylar region of seed, 304; platyspermum, 292

Contributions to our knowledge of American Carboniferous floras. VIII. Another Medullosa from Iowa, 141; IX. Some petrified seeds from Iowa, 291

Corn, see Maize Corymborchis, 55 Cranichis, 42

Cryptophoranthus, 70

Cycad forest of the Black Hills, N. D., 309 Cytological study of yeast (Saccharomyces cerevisiae), 249

Dent corn, 148, 153, 171 Des Moines, Iowa, map showing coal mines near, 143 Diacrium, 378

Ecological factors in maize variation, 162 Elleanthus, 22 "Elote" varieties of Mexican maize, 149, 164, 174 (pl. 7); showing relation between, and common varieties, 165 Eospermatopteris deposit, near Gilboa, N. Y., 309 Epidanthus, 403 Epidendrum, 315; ciliare var. Oerstedii, 327; rigidum var. angustisegmentum, 371 Erythrodes, 54 Ethnological studies of maize, 161, 162

Ferns, fossil, 141, 310 Feulgen technique in studies of yeast cultures, 252, 260, 274, 282, 284, 288 Fixations in yeast cultures, 252 Flemming's triple stain in studies of yeast cultures, 256, 278

¹For Woodson and Schery's "Flora of Panama" only the plant families and new entities are included in the Annals Index, since a complete Index will be appended at the end of each volume of the "Flora."

Flora of Panama, Part III, Fasc. 2, 1, Fasc. 3, 315

Fossil ferns, 141, 310

Fossil forest, The Gallatin, 309; views of, 311, 312

Fossil forests: of Arizona, the Black Hills, N.D., Florissant, Colo., and Gilboa, N. Y., 309; of Yellowstone National Park, 309

G

Galeandra, 400
Gallatin fossil forest, The, 309; views of, 311, 312

Genetics in maize: of denting, 171; of multiple factor characters, 171

Giemsa technique in study of yeast cultures, see Robinow's Giemsa technique

Guadalajara, Mexico, maize researches in, 148

Guatemalan Big Grain maize, 170, 171

H

Habenaria, 11 Heidenhain's haematoxylin in studies of yeast cultures, 256, 280, 286

Hexisea, 139 Huehuetoca, Mexico, maize grown near, 238, 240

Huichol Indians, varieties of maize grown by, 161, 162

Hybrid yeasts, 250

I

Iowa: Another Medulloss from, 141; map showing coal mines near Des Moines, 143; Some petrified seeds from, 291 Isochilus, 397

J

Jalisco, Mexico, maize grown in, 149, 153, 158, 159, 176-205 Johansen's methyl violet stain on yeast cultures, 253, 256, 278 Jurassic Cycad forest of North Dakota, 309

K

Kamaraspermum Leeanum, 296, longitudinal section of seed, 296, 300, 301, 306, transverse section, 298, 299, 306

Kern, Ellen M., and Henry N. Andrews. Contributions to our knowledge of American Carboniferous floras. IX. Some petrified seeds from Iowa, 291

Kernen, Jules A., Henry N. Andrews and. Contributions to our knowledge of American Carboniferous floras. VIII. Another Meduliosa from Iowa, 141

Kuleshov's studies on maize, 151, 160

L

Laelia, 382 Lenz, Lee W., Henry N. Andrews and. The Gallatin fossil forest, 309 Lepanthes, 81 Lepidocarpon, 303 Liparis, 137

M

"Magnicorp" in yeast cell: explanation of term, 254, 254; fixation of, 257; staining, 256

Maiz, 147; amarillo, 149, 185, 198, 200, 201, 209, 210, 212; amarillo del cerro, 202, de tierra más templada, 203; ancho, 170, 191, 192; areneño, 187; blanco, 149, 182, 183, 199, 223, 224, 238, 243; blanco del cerro, 221; breve, 217; cacahuazintle, 149, 166, 229, 246; chapolote, 170, 175; chino, 154, 160, 174, (pl. 3), 193; colimote, 181; colorado, 194, 225, 245; criollo, 154, 160, 176, 189, 190, 195, 196, 216; criollo blanco, 204; cuamillero, 149; de tierra fria, 227; del cerro, 218; del pais, 167; dulce, 149, 167, 174 (pl. 8), 188; espiga blanca, 205; grueso, 214; humiado, 177, 178; liso, 186; morado apastillado, 239; negro, 149, 194, 215, 240; pinto, 220, 222; pipitillo, 174 (pl. 4), 211, 244; reventador, 149, 161, 168, 175, 179, 180; rosquera, 213; tabloncillo, 149; tampenqueño, 149; tulekenio, 219; umado, 149; valenciana, 197; vaquereño, 241, 242.

Maize in Mexico—A preliminary survey, 147; Appendix, 175

Maize, Mexican: Central Mexican type, 159; characters used to study, 152; classification of, 169; collections, 175; denting in, 148, 153, 171; "elote" varieties, 149, 164, 174 (pl. 7), relation between common varieties and, 165; from Jalisco, 149, 158, 159, 176-205; from Michoacán, 153, 158, 163, 206-227; from Toluca, 149, 158, 163, 229-233; genetics of, 171; Mexican Narrow Ear, 160, 174 (pl. 2); Mexican Pyramidal, 160, 168, 170, 171, 174 (pl. 4, pl. 5); Mountain Yellow, 163, 170, 171, 174 (pl. 6); races

of, 160, 171; variation in, 147, 158; varieties of, 149, 164, 175-247 Malaxis, 128; Wendlandii, 136 Masdevallia, 73

Medullosa, Another, from Iowa, 141 Medullosa, 141; anglica, 142, var. ioensis, 142, stelar system of, 145, 146; sect. anglorota, 144; Thompsonii, 142

Metepec maize, 235 Methyl violet stain in studies of yeast cultures, 253, 256, 278

Methylene blue-eosin stain in studies of yeast cultures, 252, 258, 282

Mexican Narrow Ear maize, 160, 174(pl. 2) Mexican Pyramidal maize, 160, 168, 170,

171, 174 (pl. 4, pl. 5)
Mexico: Maize in—A preliminary survey, 147; Appendix, 175; approximate crosssection of central, where maize studies were made, 150

Mexico-Toluca maize, 163, 229-233 Michoacán, Mexico, study of maize grown in, 153, 158, 163, 206-227

Mitrospermum, 295; compressum, 295 Mountain Yellow maize, Mexican, 163, 170,

N

Nagel, Lillian. A cytological study of yeast (Saccharomyces cerevisiae), 249 Narrow Ear varieties of Mexican maize, 168, 171, 174

Orchidaceae of Panama, Part III, Fasc. 2, 1, Fasc. 3, 315

Paleontological investigations in Iowa coal mines, 141; in petrified forests, 309 Palmorchis, 37 Panama, Flora of, Part III, Fasc. 2, 1, Fasc. 3, 315 "Parvicorp" in yeast cell, explanation of term, 254; staining, 255 Petrified seeds from Iowa, Some, 291 Phragmipedium, 8 Physosiphon, 70 Platyglottis, 395 Pleurothallis, 85; Feugii var. echinata, 120 Pogonia, 17; Wagneri, 19 Polystachya, 399 Ponthieva, 42

Popcorns, Mexican, 148, 149, 161, 168

Pop-dent corn, 148; grown at Toluca, Mexico, 149, 170 Prescottia, 40 Pteridosperms: fossil stems of, 141 Purificacion, Mexico, varieties of maize at,

Q

Rhabdospermum, 292; cyclocaryon, 295; spinatum, 292, diagram of seed, 293, cellular detail, 294, longitudinal section, Robinow's Giemsa technique in studies of yeast cultures, 252, 255, 260, 276, 280,

282, 284, 286, 288

Saccharomyces cerevisiae, Cytological study of, 249; studies of budding cultures, 255, 263, 274, 276, 278, 280, 282, of living and supra-vitally stained cultures, 262, of sporulating cultures, 260, 276, 282, 284, 286, 288; techniques, 255, 260, 261; terminology of cell parts, 254, 254 San Francisco, Mexico, maize grown in, 228 Scaphosepalum, 80 Scaphyglottis, 386 Schery, Robert W., Robert E. Woodson and. Flora of Panama. Part III, Fasc. 2, 1, Fasc. 3, 315 Seeds, Some petrified, from Iowa, 291 Selenipedium, 8 Sequoia magnifica, petrified stump of, 311 Shuler Coal Mine, near Des Moines, Iowa, map showing location of, 143 Sobralia, 27; amabilis, 30; callosa, 31 Sporulating cultures of Saccharomyces cerevisiae, 260, 284, 286, 288 Spiranthes, 46 Staining methods employed in study of yeast cell, 251 Stelis, 55 Stems, fossil fern, 141 Stenoptera, 39 Syringospora, 264

Tempskya, 310 Tepotzotlán, Mexico, maize grown in, 236, 237 Thompson, Frederick O., coal balls received from, 141, 291 Toluca, Mexico: Mountain Yellow maize grown in, 163; Mexican Pyramidal maize from, 170; varieties of maize grown near, 149, 158, 229-233

149, 158, 229-233
Toluidine blue s ation, effect of, on budding yeast cultures, 263, 263

U

Urbandale Mine: coal-ball plants in, 141, 291; map showing location of, 143

V

Vanilla, 20 Variation in Mexican maize, 146, 156, 158, 163; grids used for diagramming, 150,

151; methods of studying, 152

VV7

Williams, Louis O. Orchidaceae of Panama, Part III, Fasc. 2, 1, Fasc. 3, 315 Yeast (Saccharomyces cerevisiae), A cyto-

Woodson, Robert E., and Robert W. Schery

and collaborators. Flora of Panana, Part

logical study of, 249
Yeast cell: from budding cultures, 274-282, 288, from sporulating cultures, 284, 286; interpretations of disputed entities of, 268; with parts labeled, 254

Yeasts, wild, studies of budding cultures of, 264, 288

Yellowstone National Park, petrified forests of, 309, 310

Z _

Zea Mays, 148; races of, 160

